

# Annual



# Report

## **RIDOT TMC Incident Statistics 1/1/2011 To 12/31/2011**

The Rhode Island transportation system serves 39 cities and towns, encompassing urban, suburban, and tourism areas. The Rhode Island Department of Transportation's Transportation Management Center (RIDOT TMC) has been addressing the problem of increasing congestion in Rhode Island by informing the traveler of crashes and unusual delays. In doing so, the TMC has provided measurable benefits to the transportation system, and has developed the technology and institutional awareness necessary to expand the Intelligent Transportation Systems (ITS) Program (called RhodeWays) to the benefit of Rhode Island travelers.

The RIDOT TMC maintains detailed statistics on incidents that we manage from our center. Because the data are entered by our TMC Operators, the statistics are dependent on what we can observe on the roadways with our equipment. Review and compilation of these statistics is done quarterly and then aggregated into this annual report. By making these statistics available to you, we hope that you can learn more about the program and understand the benefit of the services we provide to the Rhode Island motoring public.

The types of incidents tabulated in this report include disabled vehicles, debris on the roadway, emergency roadwork, vehicle accidents, and vehicle rollovers. Additionally, a category exists for congestion delays that are outside of typical recurring congestion. The TMC does assist in information dissemination for planned events (such as construction) as well, but those types of events are not included in the statistics. Also, abandoned vehicles are not included since they tend to skew the statistics.

*NOTE: After reviewing the data collection process, the RIDOT TMC decided that the Incident Recovery Time statistic is too subjective and difficult to accurately track. Further, the terms "Incident Clearance" and "Roadway Clearance" have been standardized by FHWA and were inconsistent with our reporting. Beginning in July 2011, we modified the data collection process and the way we present the data to better conform with FHWA and industry best practices. Some areas of this report have been modified to accurately represent data from before and after the change was implemented.*

We hope you find this report interesting and that it helps in understanding the significant benefit that the RhodeWays program provides to the people who travel Rhode Island's roadways every day. Also, please remember to check the TMC website frequently for updates (<http://www.tmc.state.ri.us>), including construction and incident information.

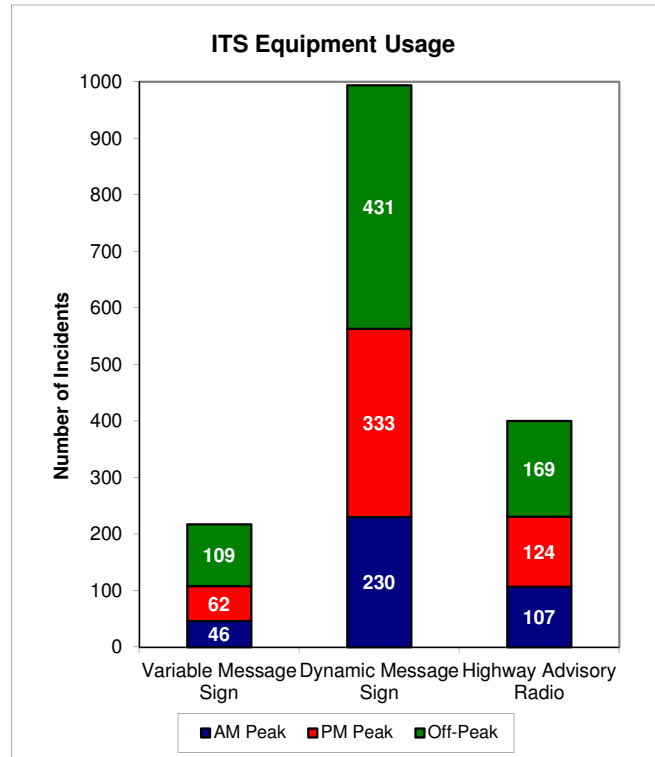
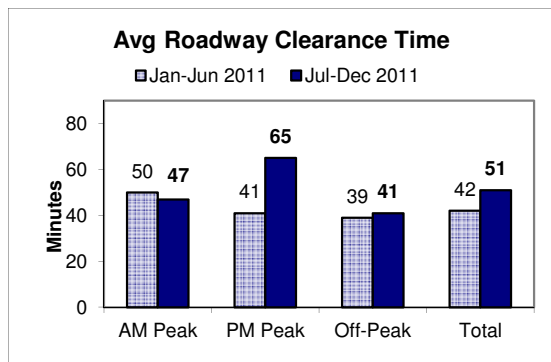
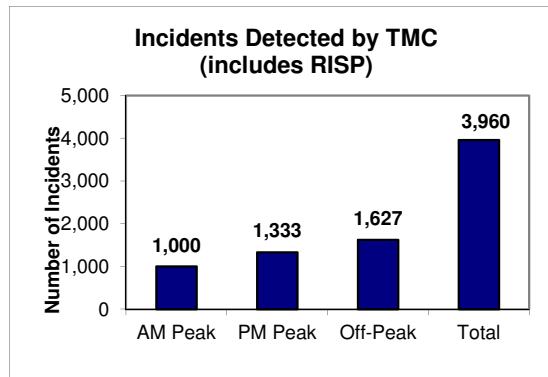
## RIDOT TMC Incident Statistics Report

### 1. Peak Period Incident Statistics\*

	AM Peak	PM Peak	Off-Peak	Total
Number of Incidents	1029	1377	1689	4095
Avg. Incident Clearance Time (min) <i>(Jan 2011 through Jun 2011 only)</i>	50	41	39	42
Avg. Roadway Clearance Time (min) <i>(Jul 2011 through Dec 2011 only)</i>	47	65	41	51
# Detected by TMC Operators	470	300	549	1319
# Detected by State Police (RISP)	530	1033	1078	2641
# Notified by RhodeWatchers	2	3	3	8
# Utilizing VMS	46	62	109	217
# Utilizing DMS	230	333	431	994
# Utilizing HAR	107	124	169	400
# Posted to Web	908	1252	1417	3577
Avg. Delay Cost**	\$205,363	\$226,045	\$168,206	\$196,992
Total Delay Cost	\$211,318,025	\$311,264,436	\$284,099,351	\$806,681,812

\* AM Peak: 6:00AM to 10:00 AM, PM Peak: 3:00PM to 7:00PM, Monday - Friday

\*\* Delay Cost is a function of incident duration, volume on the roadway, delay per person, and cost per hour of delay for both commercial and personal vehicles. Average delay cost includes only incidents with a lane blockage and represents average cost per incident.



*Note: Statistics in this report are only for incidents that the TMC reported or responded to. They do not include all incidents that occurred on Rhode Island roadways.*

**Incident Clearance Time** is the time from the start of an incident (or when it is detected) to the time when responders leave the scene and/or the incident is declared as cleared.

**Roadway Clearance Time** is the time from the start of an incident (or when it is detected) to the time when all travel lanes are available for traffic.

*The above definitions were implemented in July 2011. Previously, the following definitions were used:*

*Incident Clearance Time is the time from the start of an incident (or when it is detected) to the time it is cleared from the roadway.*

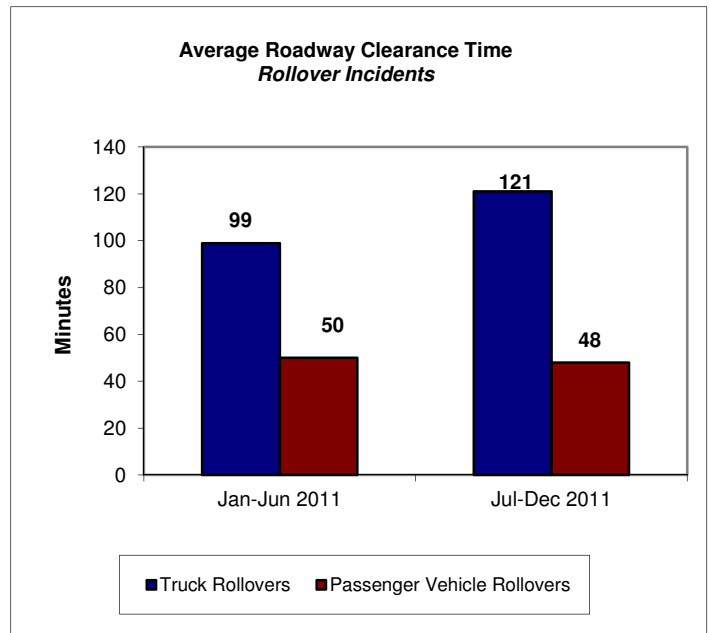
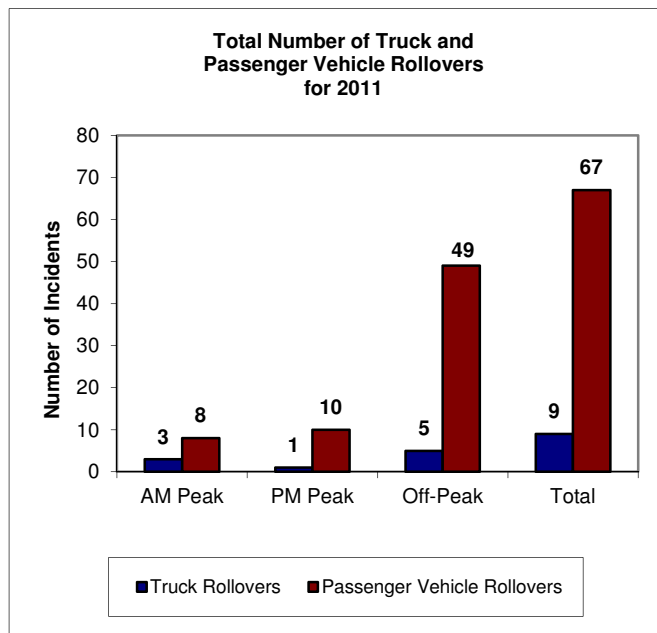
*Incident Recovery Time is the time it takes for the roadway to be rid of residual delay following incident clearance. It is based on TMC Operator observation.*

## 2. Rollover Incident Statistics\*

\* AM Peak: 6:00AM to 10:00 AM, PM Peak: 3:00PM to 7:00PM, Monday - Friday

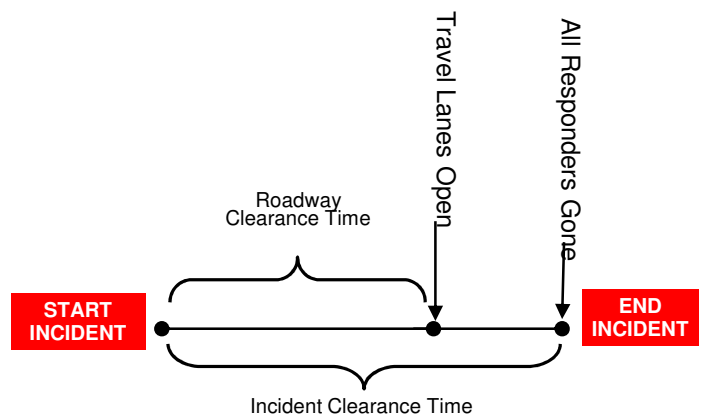
Jan-Jun 2011	Trucks				Automobiles			
	AM Peak	PM Peak	Off-Peak	Total	AM Peak	PM Peak	Off-Peak	Total
No. of Rollovers	2	0	2	4	6	6	22	34
Avg. Incident Clearance (min)	82	0	116	99	92	50	39	50

Jul-Dec 2011	Trucks				Automobiles			
	AM Peak	PM Peak	Off-Peak	Total	AM Peak	PM Peak	Off-Peak	Total
No. of Rollovers	1	1	3	5	2	4	27	33
Avg. Roadway Clearance (min)	323	101	60	121	140	45	41	48

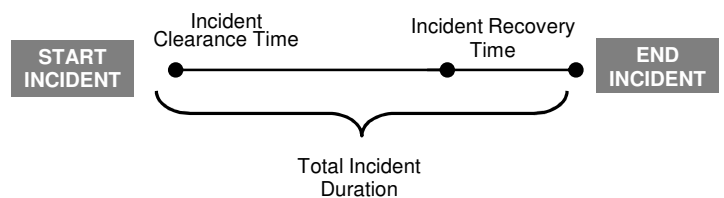


Roadway	Exit Number	Number Of Rollovers
Interstate 195 Westbound	6	2
Interstate 195 Westbound	3	1
Interstate 295 Northbound	6	1
Interstate 295 Northbound	11	1
Interstate 295 Northbound	9B	1
Interstate 295 Northbound	3B	1
Interstate 295 Northbound	2	1
Interstate 295 Southbound	6	3
Interstate 295 Southbound	10	1
Interstate 295 Southbound	9A	1
Interstate 95 Southbound	14	2
Interstate 95 Southbound	16	1
Interstate 95 Southbound	28	1
Interstate 95 Southbound	3A	1
Interstate 95 Southbound	10B	1
Interstate 95 Southbound	22A	1
Interstate 95 Southbound	12B	1
Interstate 95 Southbound	9	2
Interstate 95 Southbound	25	1
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Interstate 95 Northbound	19	1
Interstate 95 Northbound	15	1
Interstate 95 Northbound	18	3
Interstate 95 Northbound	24	1
Interstate 95 Northbound	11	1
Interstate 95 Northbound	20	1
Interstate 95 Northbound	N/A	1
Interstate 95 Northbound	17	1
Interstate 95 Northbound	13	1
Interstate 95 Northbound	8A	1
Interstate 95 Northbound	5A	4
Interstate 95 Northbound	7	1
Interstate 95 Northbound	8B	1
Interstate 95 Northbound	27	1
Interstate 95 Northbound	30	1
Interstate 95 Northbound	28	1
Route 004 Northbound	6	1
Route 004 Northbound	5	1
Route 004 Southbound	5A	1
Route 004 Southbound	6	1
Route 005 Northbound	N/A	1
Route 006 Eastbound	N/A	3
Route 006 Westbound	N/A	3
Route 006/10 Northbound	N/A	1
Route 010 Northbound	N/A	4
Route 010 Southbound	N/A	2
Route 014 Eastbound	N/A	1
Route 037 Westbound	4A	1
Route 037 Westbound	4B	1
Route 099 Northbound	N/A	1
Route 114 Northbound	N/A	1
Route 138 Eastbound	N/A	1
Route 146 Northbound	N/A	5
Route 146 Southbound	N/A	2
<b>TOTAL</b>		<b>76</b>



NOTE: The data collection procedure was modified starting in July 2011, as illustrated in the diagram above. The terms "Incident Clearance" and "Roadway Clearance" have been standardized by FHWA and better conform with industry best practices.



NOTE: Prior to July 2011, "Incident Clearance Times" were calculated slightly differently, as illustrated in the diagram above.

### 3. Incidents by Severity Level

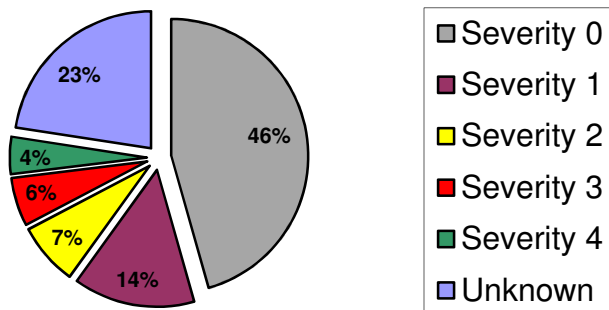
Severity Level*	No. of Incidents
Severity 0	1868
Severity 1	587
Severity 2	302
Severity 3	234
Severity 4	180
Unknown	924
<b>Total</b>	<b>4095</b>

Number of Incidents with a Secondary Incident:

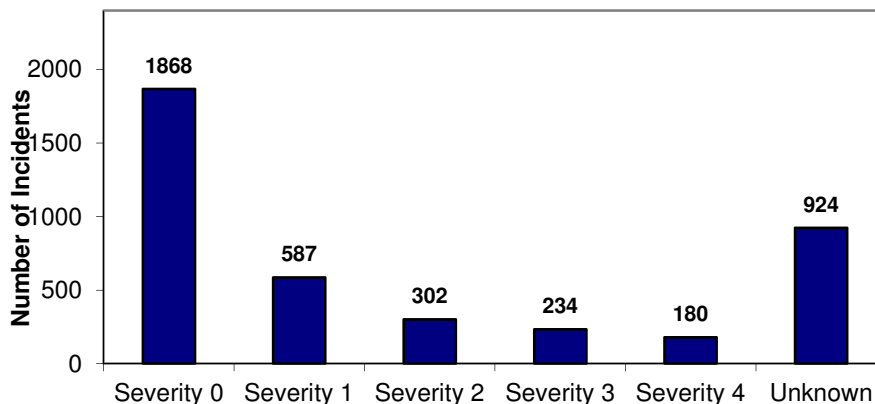
Percentage of Incidents with a Secondary Incident:

Note: A "secondary" incident is one that is the result of an earlier incident.

**Percent of Incidents by Severity Level**



**Number of Incidents by Severity Level**



#### \*Definition of Incident Severity Levels:

*Severity 0:* No injuries and no travel lanes blocked

*Severity 1:* 1/4+ travel lanes blocked with no injuries OR median/shoulder closed with injuries

*Severity 2:* 1/3 or 2/4+ lanes blocked OR Fire w/ 0 lanes closed OR hazardous materials (HAZMAT) w/ 0 lanes closed

*Severity 3:* 1/2 or 2/3 or 3/4+ lanes blocked OR Fire w/ 1/3 or 2/4 lanes closed OR Hazmat w/ 2/4 lanes closed

*Severity 4:* All travel lanes blocked OR fatality OR Hazmat w/ clean-up OR Fire w/ 1/2, 2/3, 3/4 lanes closed OR Structural damage w/ 1/3, 2/3+ lanes closed

*Unknown:* Incidents without a recorded severity level

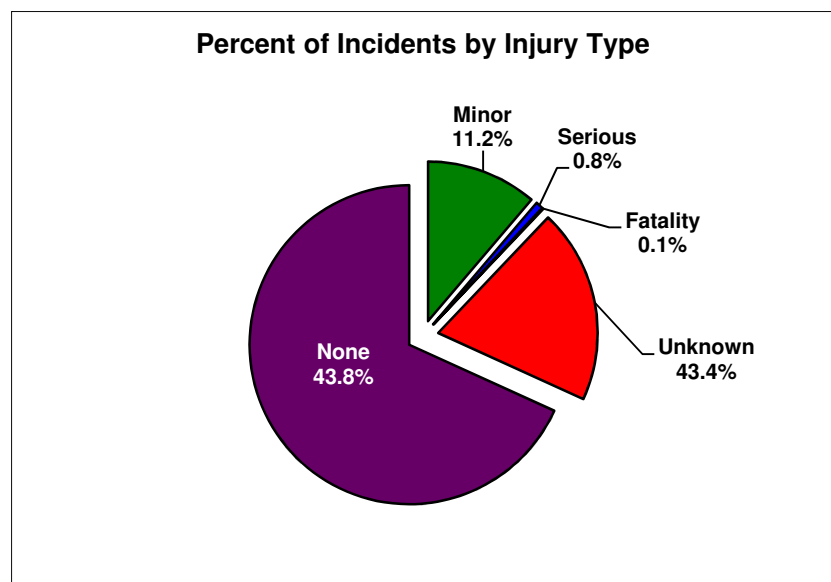
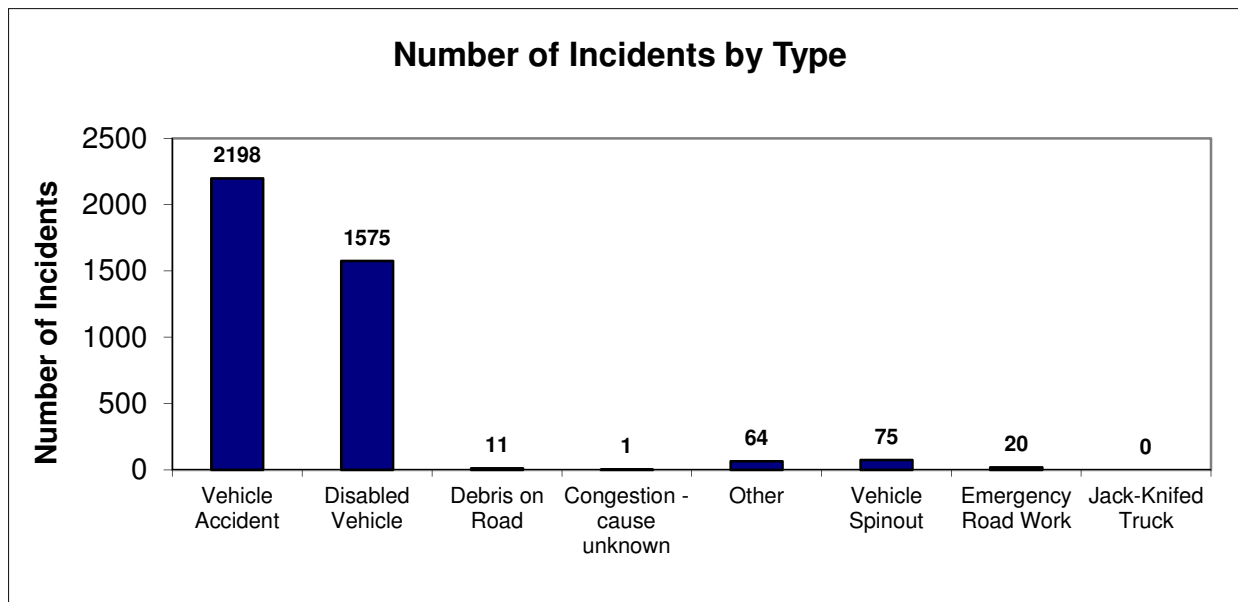
Note: For travel lanes blocked terminology, "1/4" indicates 1 out of 4 lanes blocked

#### 4. Incidents by Type

Incident Type	No. of Incidents
Vehicle Accident	2198
Disabled Vehicle	1575
Debris on Road	11
Congestion - cause unknown	1
Other	64
Vehicle Spinout	75
Emergency Road Work	20
Jack-Knifed Truck	0
<i>Total Number of Incidents</i>	<i>3944</i>

#### 5. Incidents by Injury Type

Injury Type	No. of Incidents
Minor	460
Serious	31
Fatality	5
Unknown	806
None	2793
<i>Total</i>	<i>4095</i>



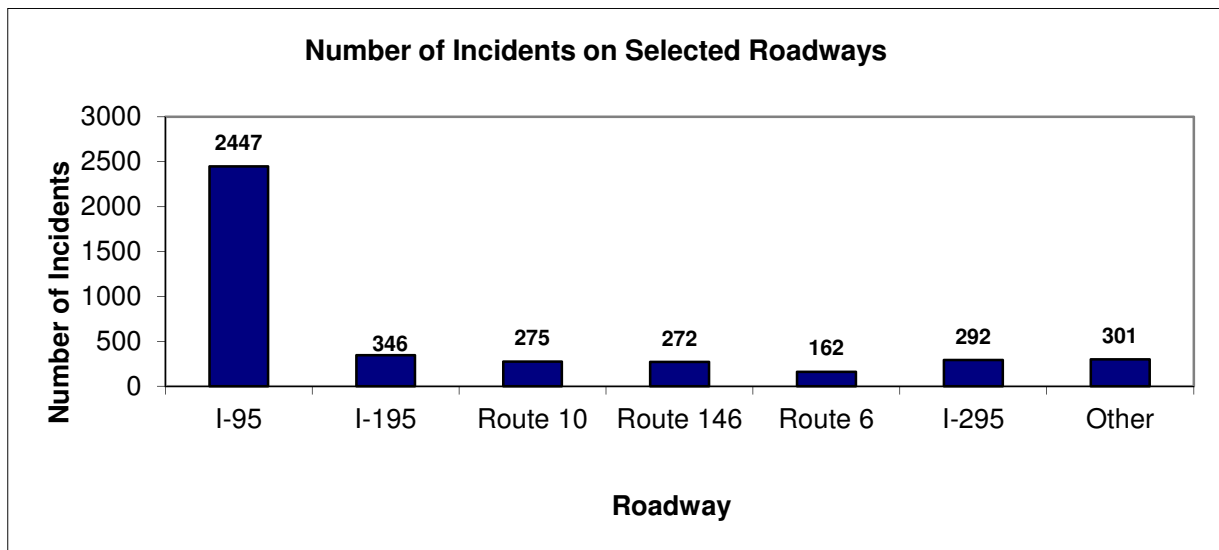
## 6. Incidents by Pavement and Weather Conditions

<b>Pavement Condition</b>	<b>No. of Incidents</b>
Dry	3118
Wet	818
Icy	41
Snow-Covered	116
Flooded	2
Other	0
<i>Total</i>	<i>4095</i>
<b>Precipitation</b>	
None	3413
Light-moderate rain falling	493
Heavy rain falling	65
Light-moderate sleet falling	7
Heavy sleet falling	5
Light-moderate snow falling	78
Heavy snow falling	34
<i>Total</i>	<i>4095</i>
<b>Wind</b>	
Calm to Moderate	3978
Moderate to Strong	104
Gusts over 50 mph	1
Gusts over 75 mph	0
Hurricane	0
Other	2
N/A	10
<i>Total</i>	<i>4095</i>
<b>Visibility</b>	
Clear	3541
Light fog	72
Dense fog	4
Reduced- rain	351
Reduced-snow	86
Poor-heavy rain/sleet	4
Poor-heavy snow	28
Reduced-smoke	2
Other	3
N/A	4
<i>Total</i>	<i>4095</i>

## 7. Incidents Detected by Primary Notifier on Selected Roadways

Roadway	Primary Notifier	No. of Incidents
I-195	TMC Operator	121
	State Police Scanner	202
	Local Fire Department	1
	Rhode Watcher	1
	Media/MetroNetworks	0
	Traffic.com	0
	Transcom	0
	Other	21
	<i>Total</i>	<i>346</i>
I-95	TMC Operator	877
	State Police Scanner	1367
	Local Fire Department	5
	Rhode Watcher	2
	Media/MetroNetworks	1
	Traffic.com	0
	Transcom	1
	Other	194
	<i>Total</i>	<i>2447</i>
I-295	TMC Operator	71
	State Police Scanner	180
	Local Fire Department	0
	Rhode Watcher	2
	Media/MetroNetworks	1
	Traffic.com	0
	Transcom	0
	Other	38
	<i>Total</i>	<i>292</i>

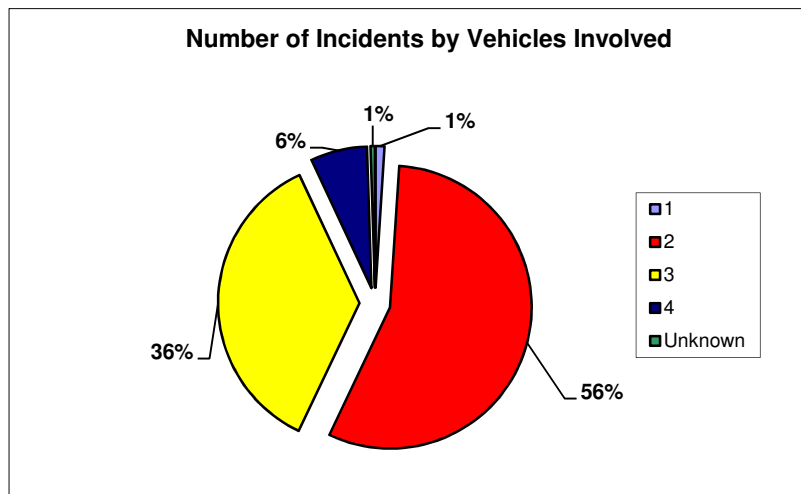
Roadway	Primary Notifier	No. of Incidents
Route 10	TMC Operator	82
	State Police Scanner	164
	Local Fire Department	1
	Rhode Watcher	1
	Media/MetroNetworks	0
	Traffic.com	0
	Transcom	0
	Other	27
	<i>Total</i>	<i>275</i>
Route 146	TMC Operator	66
	State Police Scanner	170
	Local Fire Department	0
	Rhode Watcher	1
	Media/MetroNetworks	0
	Traffic.com	0
	Transcom	1
	Other	35
	<i>Total</i>	<i>273</i>
Route 6	TMC Operator	50
	State Police Scanner	94
	Local Fire Department	1
	Rhode Watcher	0
	Media/MetroNetworks	0
	Traffic.com	0
	Transcom	0
	Other	17
	<i>Total</i>	<i>162</i>





## 8. Incidents by Number of Vehicles Involved

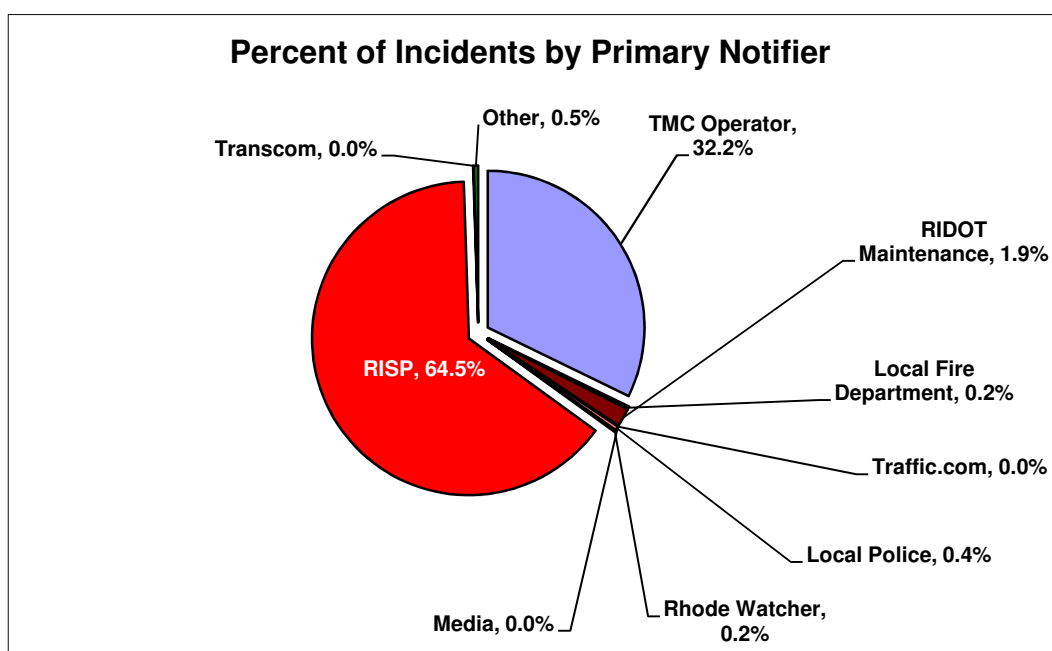
No. of Vehicles Involved	No. of Incidents
1	41
2	2255
3	1446
4	261
5	57
6	9
7	4
8	1
9	0
10+	1
Unknown	20
<b>Total Incidents</b>	<b>4095</b>



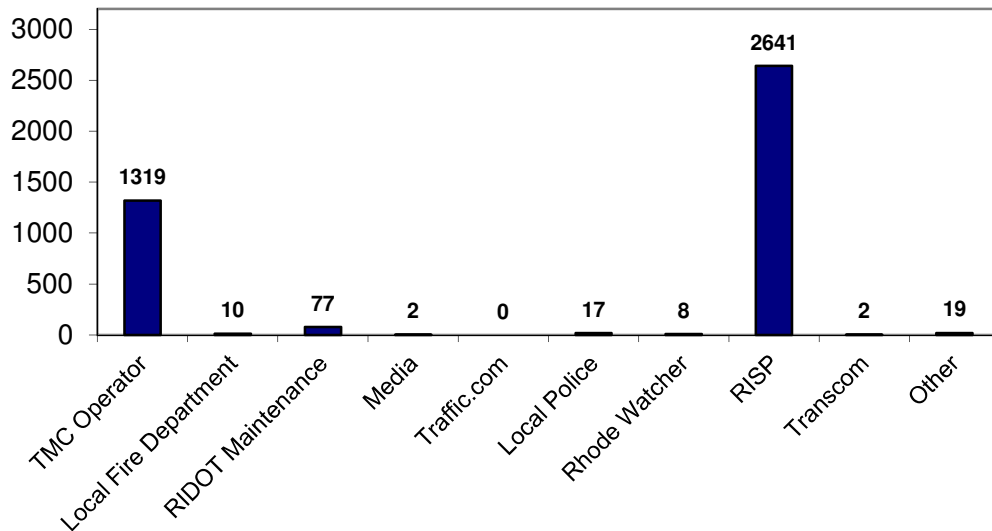
## 9. Incident Notification

Primary Notifier*	No. of Incidents
TMC Operator	1319
Local Fire Department	10
RIDOT Maintenance	77
Media	2
Traffic.com	0
Local Police	17
Rhode Watcher	8
RISP	2641
Transcom	2
Other	19
<b>Total</b>	<b>4095</b>

\*First notifier of the incident to TMC



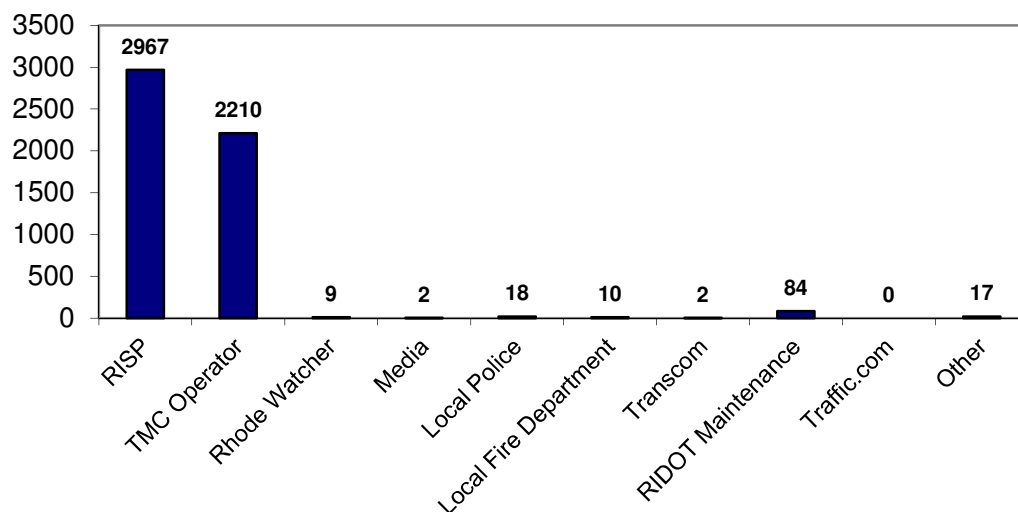
### Number of Incidents by Primary Notifier



Notifier	No. of Incidents
RISP	2967
TMC Operator	2210
Rhode Watcher	9
Media	2
Local Police	18
Local Fire Department	10
Transcom	2
RIDOT Maintenance	84
Traffic.com	0
Other	17

*Note: Primary notifier indicates the first notifier of the incident to the TMC. Additional notifiers are also logged, and are represented in the statistics for "all notifiers".*

### Number of Incidents by All Notifiers



## 10. Incident Response

On-Scene Responding Agency	No. of Incidents	Percent of Total Incidents
State Police	3386	82.69%
Tow	1393	34.02%
Local Fire Department	756	18.46%
EMS	705	17.22%
Local Police	154	3.76%
Service Patrol	68	1.66%
Mass Highway	4	0.10%
DOT	77	1.88%
Hazmat	5	0.12%
DEM	7	0.17%
Connecticut DOT	3	0.07%
Construction	3	0.07%
Coast Guard	0	0.00%
Department of Health	2	0.05%
K-9	0	0.00%
RIPTA	0	0.00%

	# of Incidents
# Utilizing Equipment (HAR,VMS or DMS)	1156
# Utilizing VMS	217
# Utilizing DMS	994
# Utilizing HAR	400
# Posted to Web	3577

*Note: Numbers and percentages in upper table indicate how many of the incidents during the month were responded to by the agency indicated. Note that multiple agencies may respond to an incident, so percentages do not add up to 100%.*

